

# **PULL - SAFE**



A.C.N. 060 617 987

**P/N PS -P**

## **Standards**

**The **PULL-SAFE** complies with the relevant parts of these Standards:**

IEC 60947-5-1:2003	Control circuit devices & switching elements
AS 60947-5-1:2004	Control circuit devices & switching elements
IEC 60947.5:1997	Control circuit devices & switching elements - Electrical emergency stop devices with mechanical latching function.
AS 3947.5.5:2000	Control circuit devices & switching elements - Electrical emergency stop devices with mechanical latching function.
AS 4024.1-2006	Safety of Machinery.
AS 1755-2000	Conveyors-Safety requirements.

## **Ce Conformity to:**

98/37/EEC	Machinery Directive
73/23/EEC	Low Voltage Directive

## **Harmonised Standards:**

EN ISO 12100	Parts 1 & 2 Safety of machinery
EN 60204-1:1997	Safety of Machinery-Electrical equipment of machines
EN 418:1992	Safety of machinery-Emergency stop equipment

## **Workshop Tested**

All switches are tested by trained personnel before leaving ELECTRIC CONTROL PRODUCTS and have a date & name label of manufacture so that all relevant Standards are complied with and the product is in a full working order.

## **Modifications of Switch**

Any modifications are **ONLY** to be made by ELECTRIC CONTROL PRODUCTS or one of their registered repairers. Any unauthorised modifications may not comply with the relevant standards and may diminish the integrity and workings of the switch and the warranty will become void.

ELECTRIC CONTROL PRODUCTS and their registered repairers or distributors will not be responsible for any damage caused to the altered switch or any item in, on, related or near the switch, nor any injury incurred, nor actions resulting from the unauthorised alterations.

## **Returns Policy/ Re Stocking**

Please return any defective switch to place of purchase for assessment. If they are deemed to be warranty repairs or not. Return warranty switches as per warranty clause. Restocking returns will only be accepted if received by ELECTRIC CONTROL PRODUCTS in their original condition and within thirty (30) days of delivery date stated on delivery documentation. A restocking fee applies (contact place of purchase for costs).

## **Warranty**

Warranty period is **twelve (12) months** from date of purchase or longer as indicated by Electric Control Products. Electric Control Products warrants that if any product is defective, it will, at its option, replace or repair the product. **This warranty shall not apply to any defect which arises from improper use, failure to follow the products instructions, or any repair or modification made with out the consent of ELECTRIC CONTROL PRODUCTS.**

The customer must return or dispose of the product, in accordance with Electric Control Products instructions which are made available through one of its registered repairers or distributors. If returned they must be suitably packaged and, where relevant, returned in accordance with any particular instructions which Electric Control Products or one of its registered repairers or distributors may have notified to the customer at the time of supply and then returned to that relevant supplier. **Returned products must be accompanied by an advice note stating the nature of any defect being claimed.** Any products or parts which are replaced by Electric Control Products or one of its registered repairers shall be the property of Electric Control Products. **Title to replacement products shall pass to the customer on delivery, and the period of the warranty shall be calculated from the date of the defective product.**

All warranty returns to Electric Control Products or its registered repairers or distributors will be sent by the customer's freight.

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## Maintenance Procedure

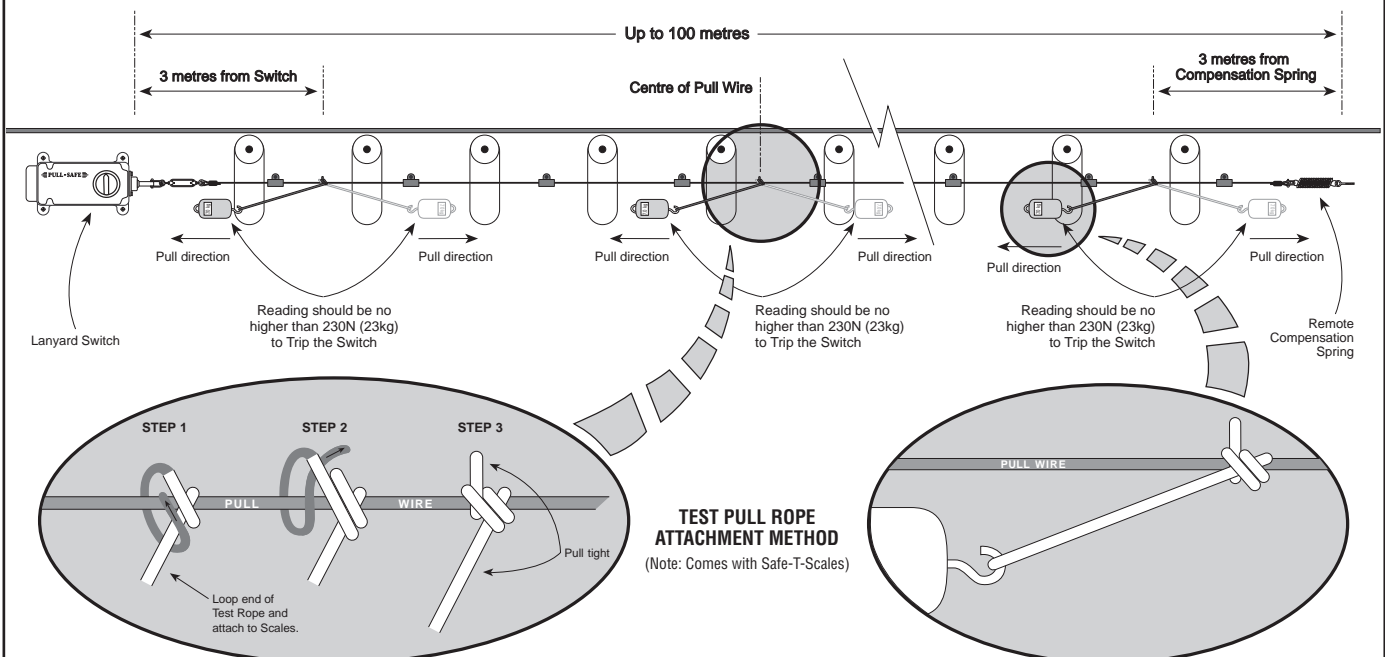
All **PULL-SAFE** switches require minimal maintenance but as in AS 4024.1:1996 & AS 1755:2000 a maintenance procedure should be carried out.

### Maintenance at 3 Month Intervals

1. Check that the switches are installed as per installation instructions.
2. Visual inspection of enclosure to ensure IP67 rating and correctly operating device. i.e. Damaged enclosure, bent pull rod, damaged dust boot etc.
3. Inspect compensation springs (Overall relaxed size is 138mm +/- 10mm)
4. Inspect all attachments are tight, free from obstructions and not worn and replace if necessary.
5. Inspect pull wire supports for wear, deterioration and build up of material, replace if necessary.
6. Inspect pull wire for wear or deterioration and replace if necessary.
7. Check that the pull rod is tensioned to the set position as per installation instructions.
8. Test that the **PULL-SAFE** Lanyard works as per Australian Standards AS1755-2000

Attach the SAFE-T-SCALES or other weight measurement device to the pull wire via the SAFE-T-SCALES rope or other means (See Figure1). The test needs to be conducted along the axis of the pull wire in both directions. Pull the wire along the axis until the switch trips then check the amount of force used to activate a trip. The reading must be less than 230N (23Kg). This must be done at intervals at the centre of pull wire's length, 3m-4m from the switch and 3m-4m from the compensation spring in both directions (See Figure 1). After each trip the switch will need to be reset before the next axis trip test is to be conducted. If the reading is higher than 230N then recheck steps 1-7, then retest the axis pull test. If the problem is still present contact the supplier of the product for advice.

FIGURE 1  
Axis Pull Wire Test



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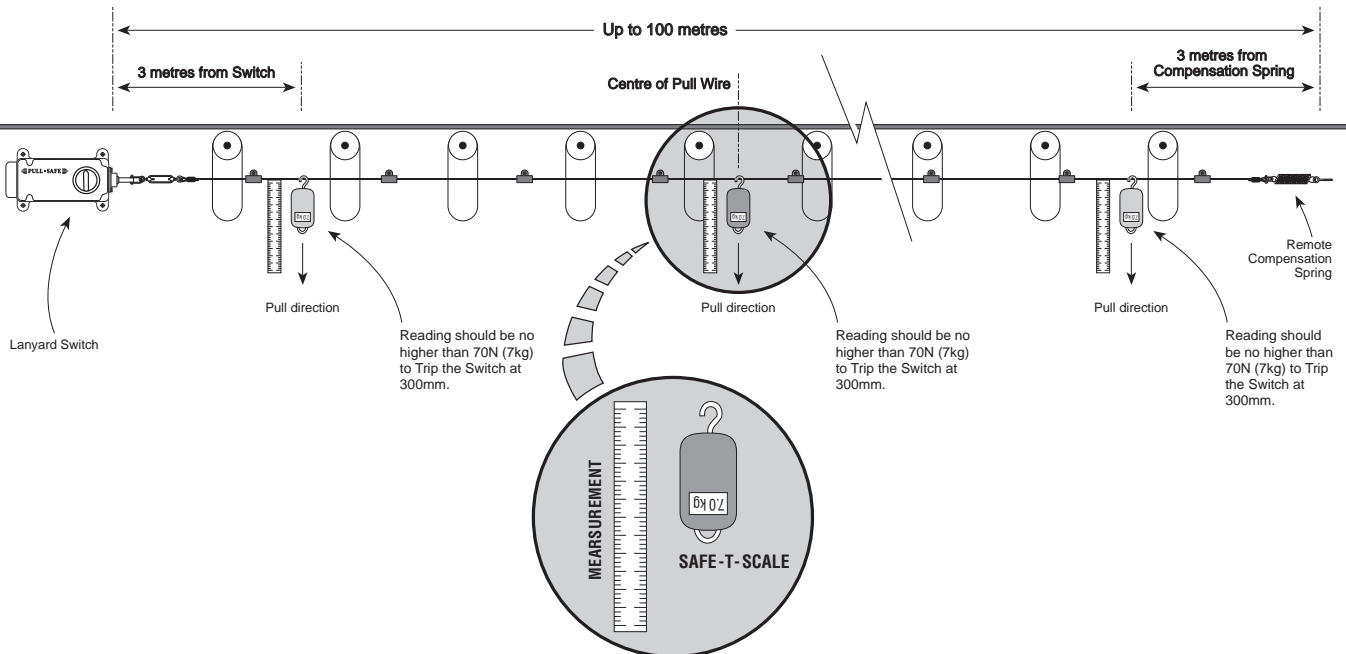
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Reset the **PULL - SAFE** and attach the SAFE-T-SCALES or other weight measurement device to the pull wire (See Figure 2), 90 degrees to the pull wire axis. A length measurement needs to be taken as well. The test needs to be conducted 90 degrees to the pull wire's axis at the same positions as test 1 and at the centre, between supports (See Figure 2). Pull the wire to the 90 degree axis and using the SAFE-T-SCALES or some other weight measurement device, measure the amount of force it takes to trip the switch. Once the switch trips check to see how far the pull wire needs to be pulled to activate a trip using a tape measure or ruler. The force used to activate a trip must not exceed 70N (7Kg) and the amount of pull must not exceed 300mm. If the readings are higher than 70N-300mm then recheck steps 1-7, retest the 90 degree axis pull test. If the problem is still present contact the supplier of the product for advice.

FIGURE 2  
**90 Degree Pull Wire Test**



9. After activation test, check that the set position of the pull rod is as per installation instructions, if not readjust turnbuckle so the pull rod is at the set position and redo step 8-9.
10. If the switch is not working return to authorised distributor for assessment if under warranty or replace.

## **Every 12 Month Period**

Remove cover & check for corrosion or water ingress. Replace if necessary.

Check electrical connections for security and corrosion.

Clean lid seal and replace cover & torque down lid screws as per limit switch wiring diagram.